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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,746	07/21/2003	Kenji Ikeda	FSF-03511	4714

7590

05/18/2005

Sheldon J. Moss
c/o Yumi Yerks
Apartment #412-North
2111 Jefferson Davis Highway
Arlington, VA 22202

EXAMINER

FAISON, VERONICA F

ART UNIT

PAPER NUMBER

1755

DATE MAILED: 05/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/622,746

Applicant(s)

IKEDA ET AL.

Examiner

Veronica F. Faison

Art Unit

1755

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-5, 7-10, and 12-20 are rejected under 35 U.S.C. 102(e) as anticipated by Tsutsumi et al (US Patent 6,736,887).

Tsutsumi et al teach a water-based ink composition comprising an aqueous dispersion of fine polymer particles containing a colorant and a polyalkylene oxide derivation (surfactant)(abstract and col.2 lines 5-8). The reference further teaches that the colorant present in the polymer particles may be a hydrophobic dye such as oil dyes, disperse dyes and basic dyes and present in the amount of 1 to 30 percent by weight; preferably oil soluble dyes and disperse dye such as Disperse Yellow 5, 42, 54, and 64, Disperse Orange 13, 29 and 31.1, Disperse Red 54, 60 and 72, Disperse Violet 33, Disperse Blue 56, 60 and 73, Solvent Black 3, 7, and 27, Solvent Yellow 14, 16 and 19, Solvent Red 1, 3, 8 and 27, Solvent Violet 3, Solvent Blue 2, 11 and 25, Solvent Blue 2, 11, and 25, Solvent Green 3 and 7 and Solvent Orange 2; which Applicant discloses on page 7 and 8 of the specification may be used in the composition (col. 2

Art Unit: 1755

lines 40-43 and col. 4 lines 15-44 and col. 5 lines 10-19). The only limitation in the claims not found by the Examiner is the melting point of the oil-soluble dye. However, this limitation is considered inherent because the cited reference discloses the same dyes that applicants disclose in the specification. The polymer used in the aqueous dispersion include vinyl polymers, polyesters and polyurethanes which have a weight average molecule weight of 3,000 to 50,000 and average particle size of 20 to 200 nm and present in the amount of 2 to 35 percent by weight (col. 2 lines 47-50 and col. 4 lines 5-14). The aqueous dispersion of fine polymer particles comprising the hydrophobic dye can be prepared by known emulsion process. The reference discloses that a neutralizing agent may be used in the emulsion process (col. 4 lines 45-53). The polyalkylene oxide is present in the amount of 1 to 15 percent by weight and has a number average molecular weight of 500 to 2000 (col. 6 lines 15-47). The ink further comprises a water-soluble organic solvent such as polyhydric alcohols and nitrogen-containing cyclic compounds that are present in the amount of 5 to 30 percent by weight (col. 6 line 53-col. 7 line 2). Additional additives such as surfactants and pH adjusting agents may be present in the ink composition (col. 7 lines 3-5). In the examples, the reference teaches that the ink is used in an ink jet printer and printed on plain paper (col. 10 lines 58-61). It is the position of the Examiner that similar compositions with similar amounts would provide clear and convincing evidence that would lead one to conclude that the surface tension of ink as taught by the reference would be the same as claimed by applicant. The composition as taught by Tsutsumi et al appears to anticipate the claimed invention.

Claims 1-13 and 15-20 are rejected under 35 U.S.C. 102(b) as anticipated by Sakuma et al (US Patent 5,877,235).

Sakuma et al teach an aqueous ink composition comprising a suspension of a polymer, preferably a polyester or a polyester amide, having adsorbed a dye or pigment, which the dye or pigment is adsorbed onto the micelles formed of the polymer and the state in which the dye or pigment is encapsulated into the micelles (abstract and col. 2 lines 30-46). The reference also teaches that the surface tension of the ink composition is within the range of 25 to 50 dyne/cm (25 to 50 mN/m) (col. 2 lines 63-65). The viscosity of the ink composition is in the range of 0.5 to 8 cps (col. 3 lines 21-25). The polyester has a number average molecular weight of 500 to 100,000, which may be present in the ink composition in the amount of 1 to 50 percent by weight (col. 7 lines 48-58). The reference further teaches that any dye can be used preferably oil soluble dyes and disperse dye such as Disperse Yellow 5, 42, 54 and 64, Disperse Orange 13, 29 and 31.1, Disperse Red 54, 60 and 72, Disperse Violet 33, Disperse Blue 56, 60 and 73, Solvent Black 3, 7, and 27, Solvent Yellow 14, 16 and 19, Solvent Red 1, 3, 8 and 27, Solvent Violet 3, Solvent Blue 2, 11 and 25, Solvent Blue 2, 11, and 25, Solvent Green 3 and 7 and Solvent Orange 2; which Applicant discloses on page 7 and 8 of the specification may be used in the composition (col. 8 lines 4-30). The dye is present in the composition in the amount of 1.5 to 25 percent by weight (col. 9 lines 12-14). The only limitation in the claims not found by the Examiner is the melting point of the oil-soluble dye. However, this limitation is considered inherent because the cited reference discloses the same dyes that applicants disclose in the specification.

Art Unit: 1755

Additional additives such as wetting agents (polyhydric alcohols), dispersants, surface tension regulators (surface active agents) (col. 9 lines 22-32). The wetting agents include glycols, nitrogen-containing compounds and dimethyl sulfoxide present in the amount of 0.1 to 50 percent by weight (col. 9 lines 41-59). The surface tension regulators may be present in the amount of 0.005 to 15 percent by weight (col. 12 lines 42-44). The aqueous ink composition may be used in an piezoelectric or thermal jet system (col. 12 lines 50-60). The reference discloses that a neutralizing agent is added to the mixture of the polyester, dye and the solvent whereby the carboxyl groups in the polyester are ionized (col. 13 lines 12-60). The composition as taught by Sakuma et al appears to anticipate the claimed invention.

Response to Arguments

Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Terminal Disclaimer

The terminal disclaimer filed on 12-29-04 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of 10/635,575 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Veronica F. Faison whose telephone number is 571-

Art Unit: 1755

272-1366. The examiner can normally be reached on Monday-Thursday and alternate Fridays 8 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VFF
5-15-05


J. A. LORENZO
SUPERVISORY PATENT EXAMINER